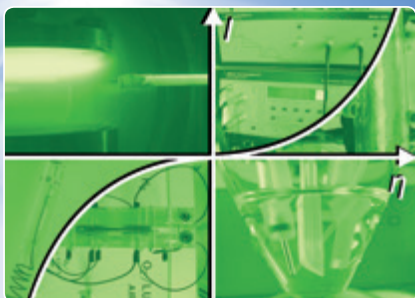




GESELLSCHAFT DEUTSCHER CHEMIKER

ELECTROCHEMISTRY 2014

Basic Science and Key Technology
for Future Applications



JOHANNES GUTENBERG-UNIVERSITÄT MAINZ
SEPTEMBER 22 – 24, 2014



JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



Conference jointly organized by

Fachgruppe Elektrochemie (GDCh)



Fachgruppe Analytische Chemie
Arbeitskreis Elektrochemische Analysenmethoden
(ELACH, GDCh)



Deutsche Bunsen-Gesellschaft für physikalische
Chemie (DBG)



Gesellschaft für Chemische Technik
und Biotechnologie e.V. (DECHEMA)



Arbeitsgemeinschaft elektrochemischer
Forschungsinstitutionen e.V. (AGEF)



Gesellschaft für Korrosionsschutz e.V. (GfKORR)



Deutsche Gesellschaft für Galvano- und
Oberflächentechnik e.V. (DGO)

www.gdch.de/electrochemistry2014

SECOND CIRCULAR & PRELIMINARY PROGRAM

COMMITTEES

▶ SCIENTIFIC COMMITTEE

Helmut Baltruschat	Bonn
Thomas Bredow	Bonn
Andreas Bund	Ilmenau
Constanze Donner	Berlin
Frank Endres	Clausthal
Andreas Fischer	Ludwigshafen
Wolfram Fürbeth	Frankfurt/Main
Hubert Gasteiger	München
Angelika Heinzl	Duisburg
Timo Jacob	Ulm
Katharina Krischer	München
Fred Lisdat	Wildau
Klaus-Michael Mangold	Frankfurt/Main
Petr Novák	Villingen/CH
Wolfgang Schuhmann	Bochum
Siegfried R. Waldvogel	Mainz
Rainer Weber	Leverkusen
Gunther Wittstock	Oldenburg

▶ LOCAL ORGANIZING COMMITTEE

Andreas Fischer	Ludwigshafen
Birgit Janza	Mainz
Klaus-Michael Mangold	Frankfurt/Main
Carsten Siering	Mainz
Siegfried R. Waldvogel	Mainz
Claudia Weidlich	Frankfurt/Main
Kerstin Gajek	GDCh, Frankfurt/Main
Silvia Kirrwald	GDCh, Frankfurt/Main

WELCOME

Dear colleagues,

the organizing committee of the conference ELECTROCHEMISTRY 2014 has the pleasure to invite you to visit Mainz, Germany, on September 22 – 24, 2014.

Basic science and key technology for future applications is the theme of the meeting in Mainz. It reflects the innovative part of electrochemistry in current research and development.

The conference aims at providing an inspiring forum to discuss the challenges faced by basic research and also engineering. The program will link fundamental and applied aspects of electrochemistry, emphasizing the interdisciplinary nature of today's electrochemistry.

The conference covers all aspects of electrochemical science and engineering. Highlights amongst others are electroorganic synthesis and a panel discussion on the new research area of microbial electrosynthesis.

Mainz is located at the river Rhine surrounded by vineyards. The Johannes Gutenberg University is home to about 37,000 students. The famous carnival in Mainz is known all over the world. Unfortunately, September is not part of the "5th season".

The lecture halls are equipped with up-to-date technology. Poster sessions, company exhibitions and coffee breaks take place next to the lecture halls.

The conference ELECTROCHEMISTRY 2014 wants to carry on the spirit of the successful meetings 2008 in Gießen, 2010 in Bochum and 2012 in Munich. As before, the meeting will be held in English, thus opening it to the international scientific community.

S. R. Waldvogel, K.-M. Mangold and A. Fischer
(Conference Chairs)

PRELIMINARY PROGRAM

Monday, September 22, 2014

- 11:00 – 13:00 Registration
- 13:00 – 13:15 Welcome (*lecture hall C01*)
- 13:15 – 14:05 Plenary Lecture by Philippe Marcus**
- 14:05 – 14:55 Plenary Lecture by Peter Broekmann**
- 14:55 – 15:30 Coffee Break (*chemistry entrance hall*)
- 15:30 – 17:40 3 parallel sessions with contributed papers
- 17:40 – 17:50 Break
- 17:50 – 18:30 **Award Lectures** (*lecture hall C01*)
Joachim Walter Schultze Prize of the AGEF
Promotion Prize in the Field of Applied
Electrochemistry
- 18:30 – 21:30 Poster Session with Beer & Pretzels

Tuesday, September 23, 2014

- 09:00 – 09:50 **Plenary Lecture by Jun-ichi Yoshida**
- 09:50 – 10:20 Coffee Break (*chemistry entrance hall*)
- 10:20 – 12:30 I) 2 parallel sessions with keynote lectures followed by contributed talks
II) German-Japanese Symposium on Electro-synthesis with keynote lectures followed by contributed talks
- 12:30 – 14:00 Lunch
- 14:00 – 15:30 I) 2 parallel sessions with keynote lectures followed by contributed talks
II) German-Japanese Symposium on Electro-synthesis with keynote lectures followed by contributed talks
- 15:30 – 16:00 Coffee Break (*chemistry entrance hall*)
- 16:00 – 17:30 I) 2 parallel sessions with contributed papers
II) German-Japanese Symposium on Electro-synthesis with keynote lectures followed by contributed talks
- 19:30 Conference Dinner & Awards Presentation at Kurfürstliches Schloss, Mainz

Wednesday, September 24, 2014

- 09:00 – 09:50 **Plenary Lecture by Martin Winter**
- 09:50 – 10:20 Coffee Break (*chemistry entrance hall*)
- 10:20 – 12:30 3 parallel sessions with keynote lectures followed by contributed talks
- 12:30 – 14:00 Lunch
- 14:00 – 15:30 I) Special feature “Microbial electrochemical technologies – future perspectives” – panel discussion and contributed talks
II) 2 parallel sessions with keynote lectures followed by contributed talks
- 15:30 – 16:00 Coffee Break (*chemistry entrance hall*)
- 16:00 – 17:40 Contributed talks
- 17:45 – 18:00 Closing remarks (*lecture hall C01*)

▶ DEADLINES

- June 2, 2014** Notification of acceptance of talks/posters
- June 28, 2014** Deadline for scholarships
- June 30, 2014** Deadline for early registration; early registration is required for inclusion of oral contributions into the conference program (additional 50 € fee for late registration)
- August 1, 2014** Deadline for last-minute poster submission
- August 21, 2014** Deadline for cancellation (full refund minus 25 € processing fee)

INVITED LECTURERS

To contribute to the high scientific quality of the conference, plenary and keynote lectures given by internationally recognized scientists from Germany and abroad were invited by the organizers. The topics of these talks cover a broad spectrum of problems and new trends in the field of electrochemistry.

▶ PLENARY LECTURES

Peter Broekmann, Bern/CH

From Fundamentals towards Applications: Nanoelectroplating in the Semiconductor Industry

Philippe Marcus, Paris/FR

Corrosion Processes at the Nanoscale

Martin Winter, Münster/DE

A Feeling Sense of Déjà vu? From Lithium Metal to Lithium Ion Batteries and Back Again

Jun-ichi Yoshida, Kyoto/JP

New Strategies in Electroorganic Synthesis: Reaction Integration Using Electrogenerated Cationic Intermediates

▶ KEYNOTE LECTURES

Fabio La Mantia, Bochum/DE

The Effect of Aging on the Kinetics and Thermodynamics of Lithium-ion Intercalation in TiO_2 Nanoparticles

Izabella Brand, Oldenburg/DE

Application of Infrared Spectroscopy under Electrochemical Control for the Analysis of Organized Films: Adsorption of Collagen on the Electrode Surface

Karl Mayrhofer, Düsseldorf/DE

Combinatorial Study of Fundamental Electrocatalyst Performance – the Scanning Flow Cell Coupled to Online Analytics

Marc Koper, Leiden/NL

Proton-coupled Electron Transfer in Electrocatalysis

Nicolas Plumeré, Bochum/DE

Mediated Electron Transfer between Redox Enzymes and Electrodes for Sensing and Technological Applications

Olaf Magnussen, Kiel/DE

In operando studies of Atomic-Scale Processes in Electrodeposition

INVITED LECTURERS

Nuria Garcia-Araez, Southampton/GB

Soluble Redox Catalysts to Enhance and Relocate Oxygen Reduction and Evolution in the Lithium-Air Battery

Joachim Maier, Stuttgart/DE

Solid State Electrochemistry – From the Macro- to the Nanoscale

Seji Suga, Okayama/JP

Electrochemically Generated Carbocations for Stereoselective Synthesis and Catalytic Reactions

Shinsuke Inagi, Tokyo/JP

Electrochemical Post-Functionalization of π -Conjugated Polymers



ORAL AND POSTER CONTRIBUTIONS

Last-minute poster submissions from all areas of electrochemistry and electrochemical engineering are possible till **August 1, 2014**.

The poster session will be on Monday from 18:00 to 21:00, but posters will be left mounted for viewing for the entire duration of the conference.

Abstracts for last-minute poster contributions need to follow the style guidelines published on the conference website:

www.gdch.de/electrochemistry2014

Eight different sections on the following topics are being planned:

- **Batteries and electrochemical energy storage devices**
- **Bioelectrochemistry**
- **Corrosion science and electrochemical machining**
- **Electrochemical engineering**
- **Electrochemical water treatment**
- **Electroanalysis and sensors**
- **Electrolytes**
- **Electroplating**
- **Electrosynthesis and electrocatalysis**
- **Fundamental and theoretical electrochemistry**
- **Solid state electrochemistry and photoelectrochemistry**

► SCHOLARSHIPS

The GDCh Division of Applied Electrochemistry offers a limited number of scholarships to student Division members in education presenting a scientific contribution (main author of an oral contribution or poster). Please send your application until **June 28, 2014**, latest to the GDCh, Ulrike Bechler, u.bechler@gdch.de.

► SCIENTIFIC AWARDS



Promotion Prize in the Field of Applied Electrochemistry

The division of Electrochemistry of the Gesellschaft Deutscher Chemiker e.V. (German Chemical Society, GDCh) awards the **Promotion Prize in the Field of Electrochemistry** (Förderpreis auf dem Gebiet der Elektrochemie) to a young chemist. The prize is donated by BASF SE and consists of a certificate, € 1000, a lecture by the Award recipient and travel expenses. The prize will be awarded during the conference dinner. Application for this prize is already closed.



Joachim Walter Schultze Prize of the AGEF

This prize of the AGEF (Working Party of Electrochemical Research Institutions) will be awarded at the Electrochemistry 2014 to a young electrochemist who is at the beginning of her/his scientific carrier, has made a significant contribution to electrochemical research, and has demonstrated a visible independent profile.

Application for this prize is already closed.

Metrohm Autolab Poster Prize

Metrohm and Metrohm Autolab offer the Metrohm Autolab poster prize (introduced at ELACH conference 1993). Three excellent poster contributions will be awarded (€ 3000 in total). Posters will be judged by the Award Committee appointed by the Scientific Advisory Board, and winners will be announced at the conference dinner.

SOCIAL PROGRAM

Monday, September 22, 2014

18:00 – 21:00 **Poster Session**
with free drinks and snacks

Tuesday, September 23, 2014

19:30 **Conference Dinner and Awards Presentation**
(posters and prizes)
in the castle “Kurfürstliches Schloss” in Mainz

Price p.P. (including beverages)*:

Regular Participants: € 55

Students/Postdocs: € 35

Booking required

* 19% VAT included



▶ VENUE

The conference will take place at the central campus of the Johannes Gutenberg-Universität Mainz
Lecture halls C01–03
Duesbergweg 10–14
55128 Mainz

▶ TRAVEL INFORMATION

Johannes Gutenberg University Mainz is easily reachable by car, train, and plane. Mainz University is a campus university and as such it is integrated into the Mainz public transport network. The campus itself has multiple bus stops for various locations on campus.

By Train and/or Bus

We recommend to leave Mainz central station via exit “West”. Please walk along the parking area towards the bus stop with buses heading to the right hand, away from the bridge crossing the railroads. Pick either of the lines 54, 55, 58 or 9. Take a short trip ticket. You can buy it directly from the bus driver or use an automatic ticket machine. Leave the bus at the second stop “Friedrich-von-Pfeiffer-Weg” and take the pedestrian bridge. When leaving the bridge walk towards the high apartment building. After passing Staudinger-Weg, turn left (street without name). The institutes are situated on the right hand side at the end of the street.

DB BAHN “Deutsche Bahn” offers attractive conditions for travelling to GDCh events. Further information can be found at www.gdch.de/bahn

By Car

Public parking is restricted at Mainz campus and only allowed with special admission. Therefore, **travelling by car is not recommended**. If access to Campus is required, set your navigation to Ackermannweg and take the right lane to stop at the central gate.

Public parking near Mainz campus: Set your navigation to Dalheimer Weg 2, parking areas are on the left hand side.

Please see the attached site plan for parking in the nearest vicinity of the campus.

By Plane – Airport Frankfurt/Main

- Train (EC, ICE, IC) from long-distance station Frankfurt airport or train (RE, RB or S8) from airport regional station to Mainz main station
- Duration: 30-40 minutes
- Ticket price: € 4,35 – € 13 (depending on the train). When using regional trains (RB/RE/S8), your ticket will include the bus fare to campus.

REGISTRATION

▶ REGISTRATION

Please register online via internet not later than **June 30, 2014** at:

www.gdch.de/electrochemistry2014

After June 30, 2014, a late registration fee of € 50 will be added. All tickets and conference papers (incl. book of abstracts) will be given to participants upon check-in at the registration desk.

Participants are requested to wear their conference badges at all times for identification and admittance to the conference rooms.

For online-registration, payment by credit card or direct debit (only with German bank account) is preferred. If you want to pay by bank transfer (free of bank commission) please do not forget to print out the invoice at the end of your online-registration.

Please pay the fees to the following account (free of bank commission):

Gesellschaft Deutscher Chemiker e.V.
Commerzbank AG, Frankfurt/Main
IBAN DE85 5008 0000 0490 0200 00
SWIFT-BIC DRES DE FF
Code: 5200 09 / Electrochemistry 2014



REGISTRATION

REGISTRATION FEES**

	Early registration until June 30, 2014	From July 1, 2014
Member of joined scientific organizations	€ 220	€ 270
Non-member	€ 270	€ 320
Student/Postdoc (member)*	€ 110	€ 135
Student/Postdoc (non-member)*	€ 135	€ 185
Gold member (with over 50 years of GDCh membership)	free of charge	free of charge
Conference Dinner (including beverages)	€ 55	€ 55
Conference Dinner for Student/Postdoc (including beverages)	€ 35	€ 35

*) Fee applies to bachelor, master and Ph.D. students (valid student card or confirmation of supervisor required)

**) The registration fees are not liable to value added tax (tax exemption additional § 4 Nr. 22a UstG.)

Lunch at Mainz cafeteria ("Mensa"), the coffee breaks as well as the drinks & snacks during the Poster Session are included in the registration fee.

If fees are paid in advance, but after **September 5, 2014**, we kindly ask participants to show proof of payment when claiming their tickets and conference papers at the conference office. Credit cards (Amex, Mastercard, VISA) will be accepted.

CANCELLATION

Written cancellations received on or before **August 21, 2014** will be refunded less a € 25,- administration fee. After that date, the full amount of the invoice has to be paid. Requests for refund will not be accepted; however, registration may be transferred to another member of your organisation. In this case please send a note to tg@gdch.de.

If the conference is cancelled for whatever reason, fees paid will be refunded. Further recourse is excluded.

▶ BEVERAGES

Coffee, tea and soft drinks will be provided for free during the breaks.

▶ LUNCH

The Mainz cafeteria (“Mensa”) is situated next to the lecture halls. Lunch is included in the registration fee. You will have access to the main area with two different main dishes, a selection of two stews, selectable side dishes as well as a salad bar. Sparkling water is included as well.

▶ ROOM RESERVATION

Rooms are reserved for the participants in various hotels throughout the city. The mainzplus CITYMARKETING will gladly assist you in booking accommodation in all categories. Please apply no later than **August 8, 2014**.

The link can be found on our homepage (Accommodation)

www.gdch.de/electrochemistry2014

The customers will be held accountable for non-occupancy of reserved rooms.

▶ COPYRIGHT PERMISSION

Photos made on GDCh conferences are used exclusively by GDCh for documentation, news coverage and advertisement.

INFORMATION CONCERNING THE SCIENTIFIC PROGRAM, ORGANIZATION ▶ AND OTHER GENERAL INFORMATION

Prof. Siegfried R. Waldvogel
Johannes Gutenberg-Universität Mainz
Duesbergweg 10 – 14
55128 Mainz
Germany

Phone: +49 6131 39-26069
E-mail: waldvogel@uni-mainz.de

Dr. Klaus-Michael Mangold
DECHEMA-Forschungsinstitut
Electrochemistry
Theodor-Heuss-Allee 25
60486 Frankfurt am Main
Germany

Phone: +49 69 7564-327
E-mail: mangold@dechema.de

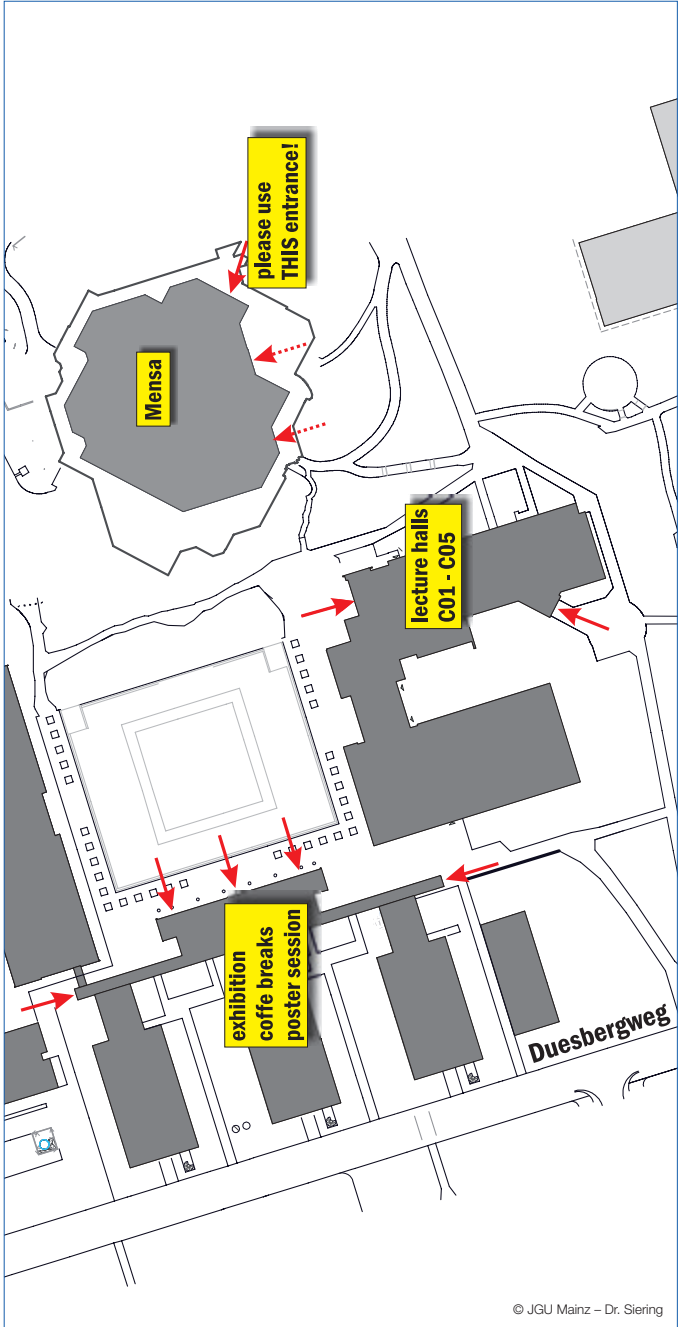
▶ INFORMATION BEFORE AND AFTER THE MEETING

Gesellschaft Deutscher Chemiker e. V.
Congress Team / Electrochemistry 2014
P.O. Box 90 04 40
60444 Frankfurt am Main
Germany

Phone: +49 69 7917-358 (Silvia Kirwald)
E-mail: tg@gdch.de
Internet: www.gdch.de/electrochemistry2014

Executive Director: Professor Dr. Wolfram Koch,
Registered charity no: VR 4453, Registergericht Frankfurt am Main

LECTURE HALLS



1 2 3 4 5 6 7 8 9 1 2 3 4 5
U N V E R Z I C H T B A R E
1 2 3 4 5 6 7 8 9 1 2 3 4 5 6
B A U S T E I N E I H R E R
1 2 3 4 5 6 7 8
K A R R I E R E

Workshops Information

Konzepte **Kolloquien** Netzwerk

Beratung Perspektiven Wissen Impulse Beratung

Tagungen Konzepte International Karriereservice

Kurse Diskussion Beratung **Fortbildung** Jobbörse

Workshops **Kurse** Fortbildung Forschung Kolloquien

Netzwerk Tagungen Beratung Informationen Konzepte

Fortbildung Jobbörse Kurse **Wissen**

Diskussion Karriereservice

www.gdch.de



GESELLSCHAFT DEUTSCHER CHEMIKER

Gesellschaft
Deutscher Chemiker e.V.
Postfach 90 04 40
60444 Frankfurt am Main

Telefon: 069 7917-0
Fax: 069 7917-232
E-mail: gdch@gdch.de

SPONSORS AND SUPPORTERS

We are grateful for the financial support by:

EVENT SPONSOR



PLATINUM SPONSORS



ATOTECH



BOSCH

Invented for life

GOLD SPONSORS



Bayer **MaterialScience**

SILVER SPONSORS



Metrohm



SENSOLYTICS

BRONZE SPONSORS



Agilent Technologies



Eilenburger
EUT GmbH

SPONSORS AND SUPPORTERS

We are grateful for the financial support by:

WILEY-VCH

The conference is also generously supported
by the following organisations:

DFG Deutsche
Forschungsgemeinschaft

